

FIG. 1

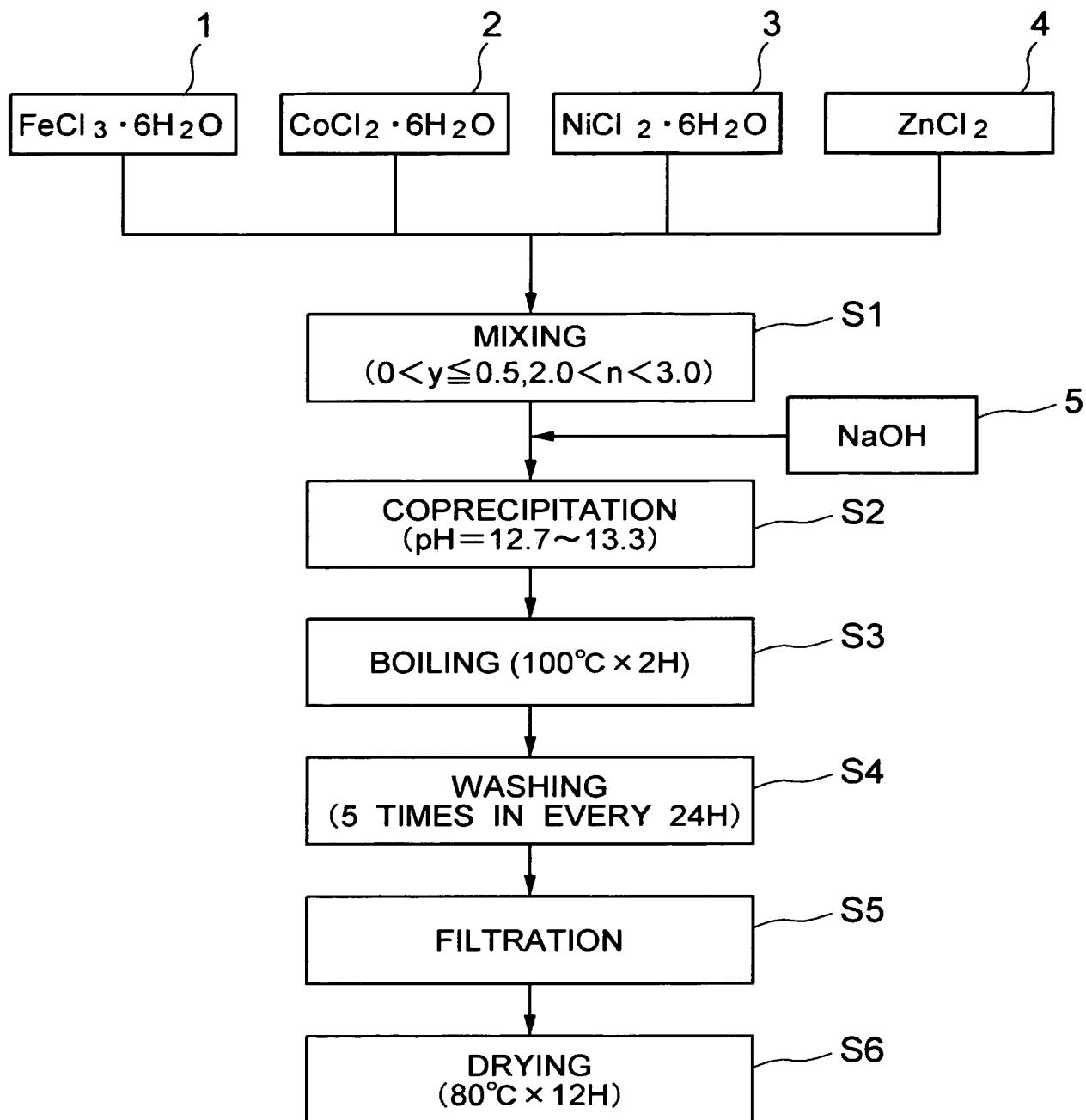


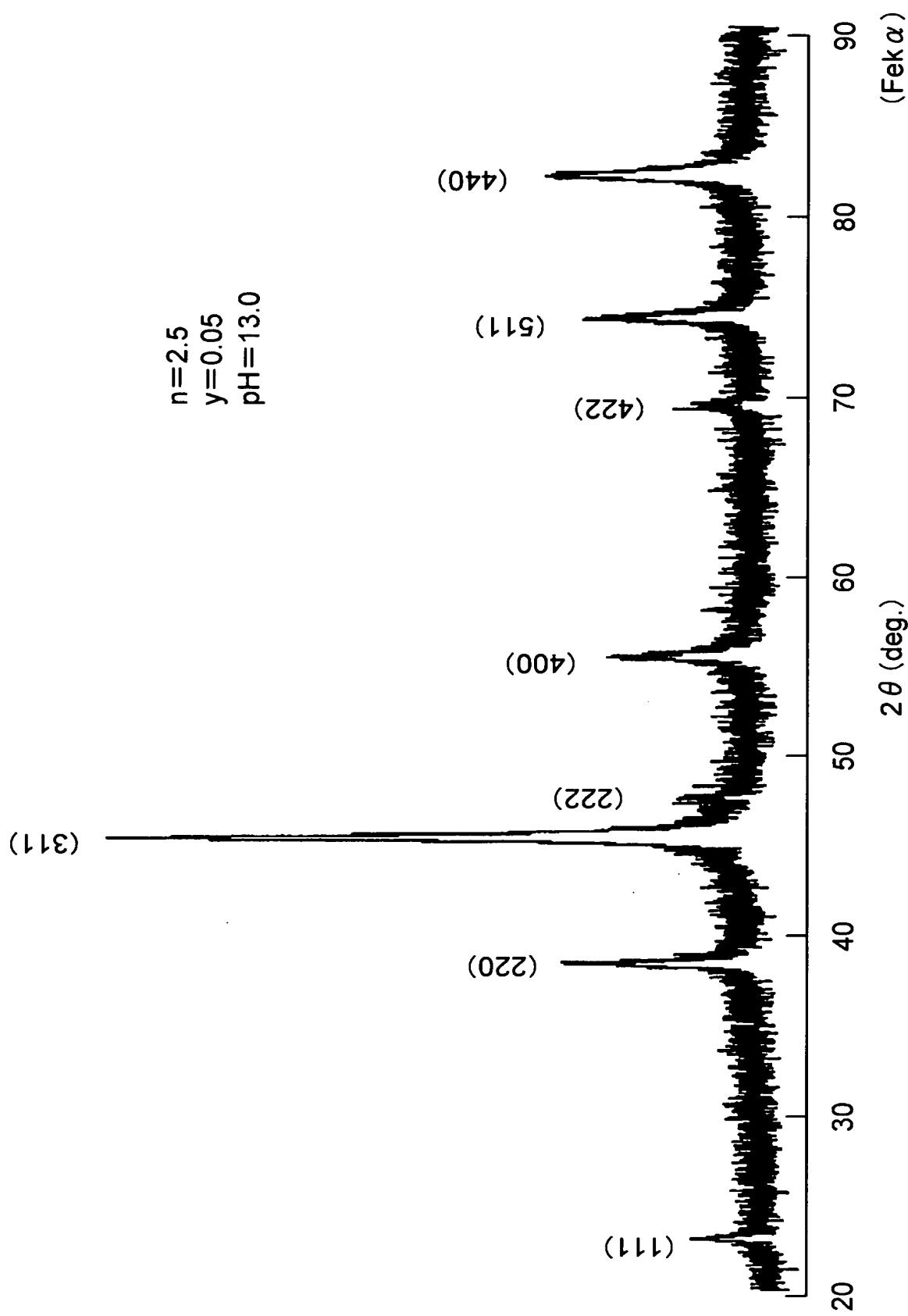
FIG. 2

EXAMPLES	Fe <sup>3+</sup> CONCENTRATION (mol/l)	OUNT OF Fe <sup>3+</sup> SOLUTION (ml)	OUNT OF Co <sup>2+</sup> CONCENTRATION (mol/l)	OUNT OF Co <sup>2+</sup> SOLUTION (ml)	Ni <sup>2+</sup> CONCENTRATION (mol/l)	OUNT OF Ni <sup>2+</sup> SOLUTION (ml)	Zn <sup>2+</sup> CONCENTRATION (mol/l)	OUNT OF Zn <sup>2+</sup> SOLUTION (ml)	pH VALUE OF PRECIPITATION SLURRY (pH)	Fe/(Co +Ni+Zn) n-MOLAR RATIO (x+y)	ZnO SUBSTITUTION AMOUNT
1-2	0.25	200	0.1	100	0.1	90	0.1	10	13.0	2.5	0.05
2-2	0.225	200	0.1	100	0.1	90	0.1	10	13.0	2.25	0.05
2-3	0.25	200	0.1	100	0.1	90	0.1	10	13.0	2.5	0.05
2-4	0.275	200	0.1	100	0.1	90	0.1	10	13.0	2.75	0.05
3-2	0.25	200	0.1	100	0.1	90	0.1	10	13.0	2.5	0.05
3-3	0.25	200	0.1	100	0.1	90	0.1	10	13.3	2.5	0.05

## FIG. 3

EXAMPLES	COERCIVITY HcJ (kA/m)	SATURATION MAGNETIZATION $\sigma_s$ (Wb · m/kg)	REMANENT MAGNETIZATION $\sigma_r$ (Wb · m/kg)
1-2	372.0	$62.0 \times 10^{-6}$	$36.6 \times 10^{-6}$
2-2	330.4	$61.9 \times 10^{-6}$	$36.6 \times 10^{-7}$
2-3	372.0	$62.0 \times 10^{-6}$	$36.6 \times 10^{-6}$
2-4	425.8	$43.3 \times 10^{-6}$	$19.5 \times 10^{-6}$
3-2	372.6	$62.0 \times 10^{-6}$	$36.6 \times 10^{-6}$
3-3	372.9	$62.8 \times 10^{-6}$	$37.0 \times 10^{-6}$

FIG. 4



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FIG. 5

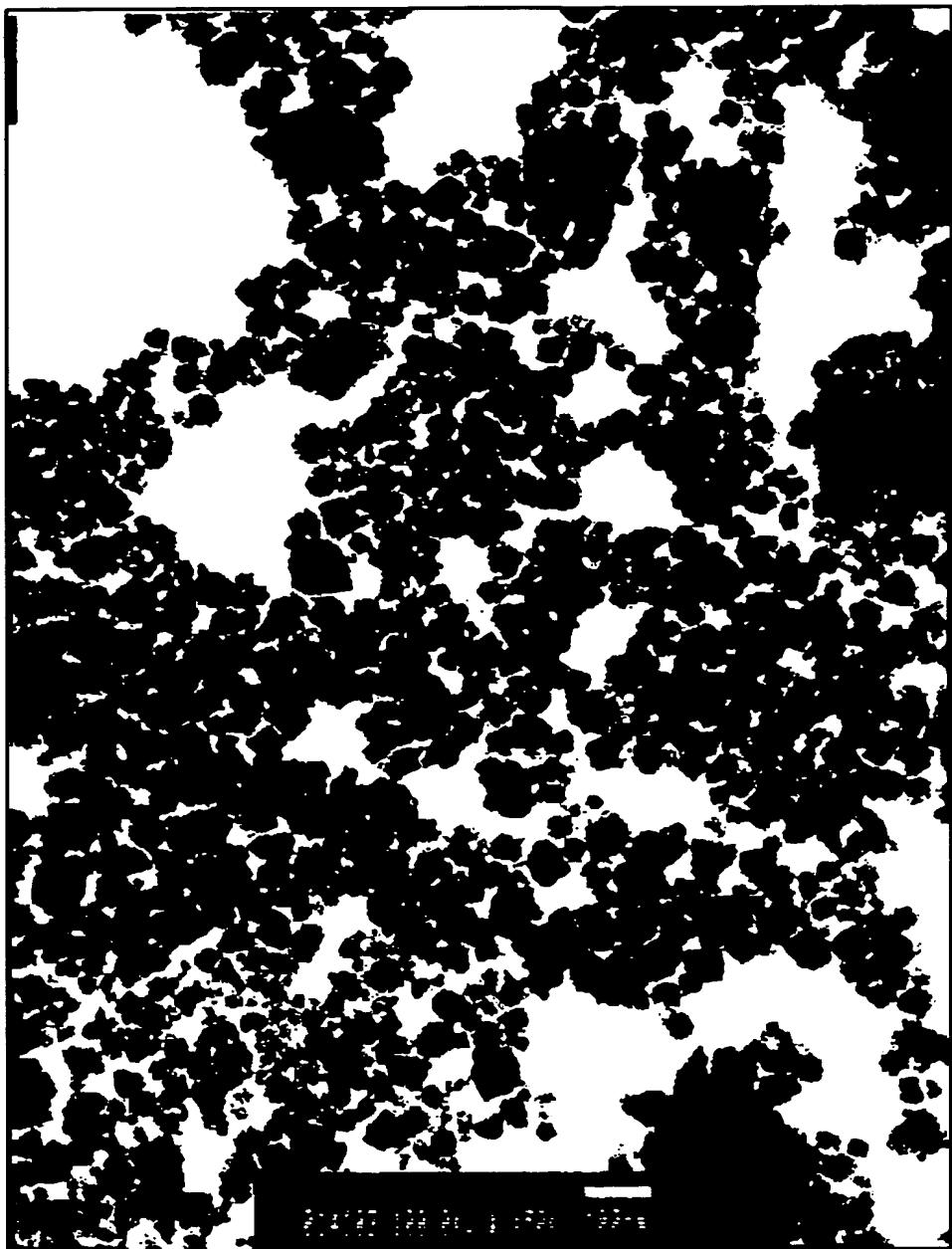


FIG. 6

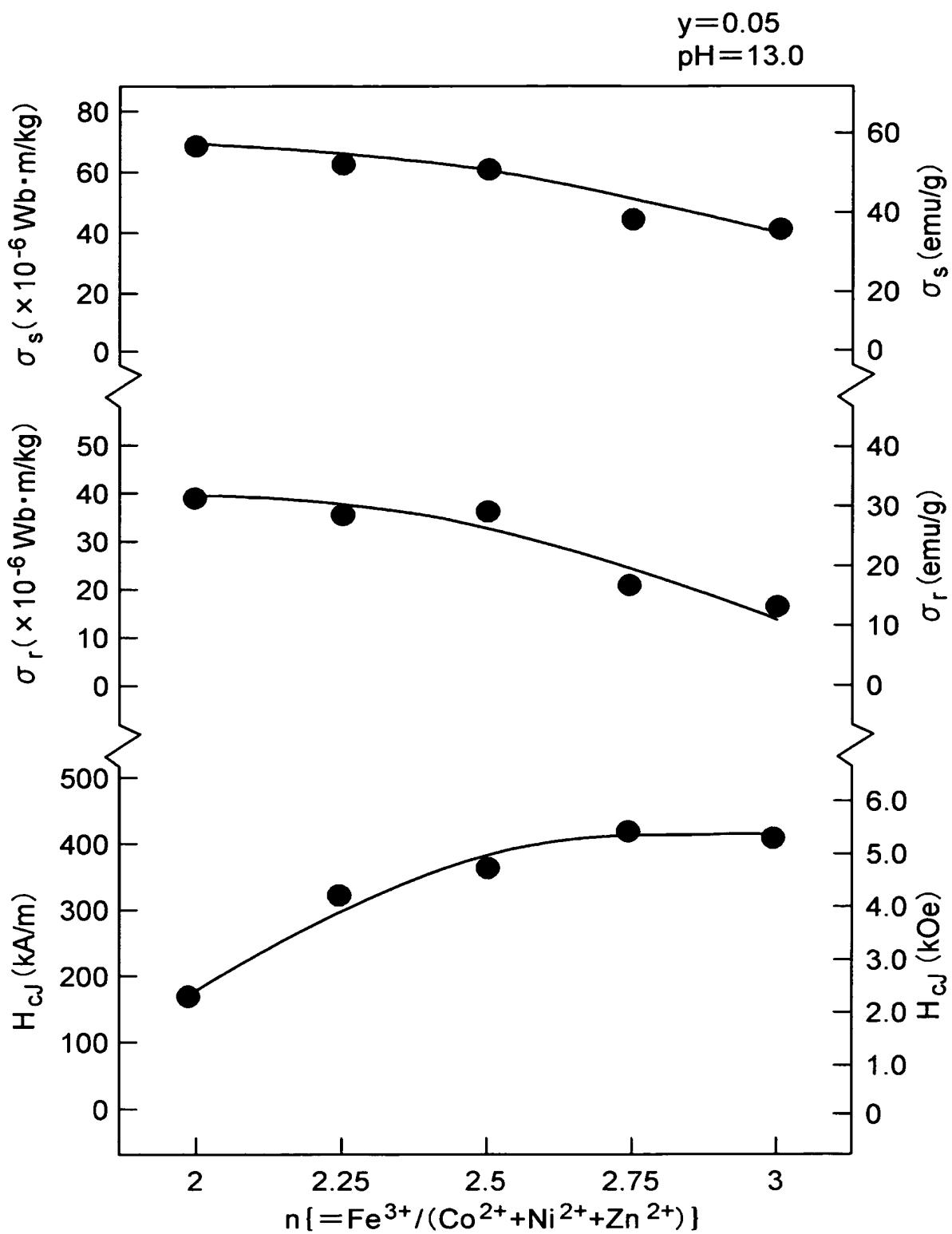
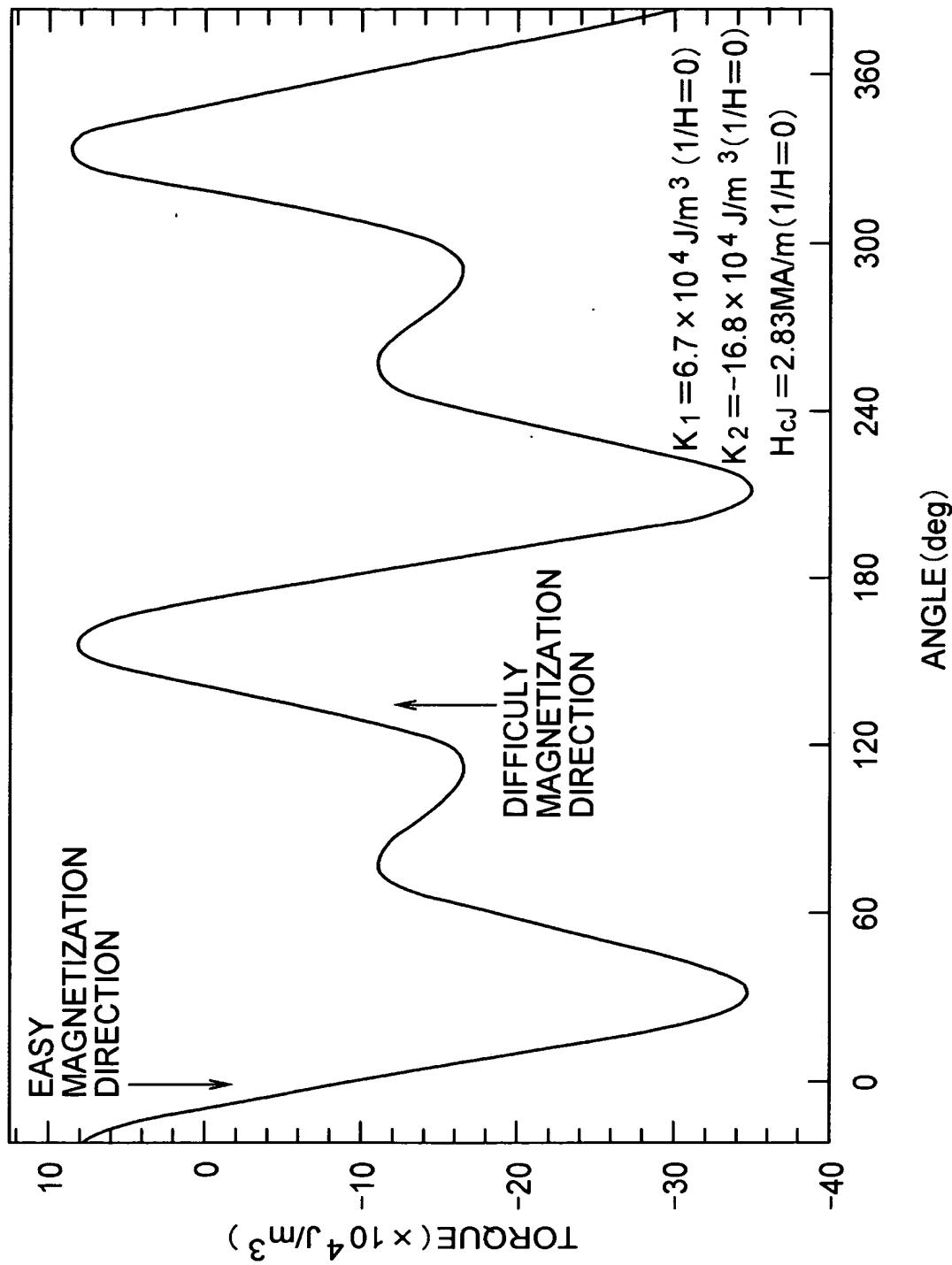


FIG. 7



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FIG. 8

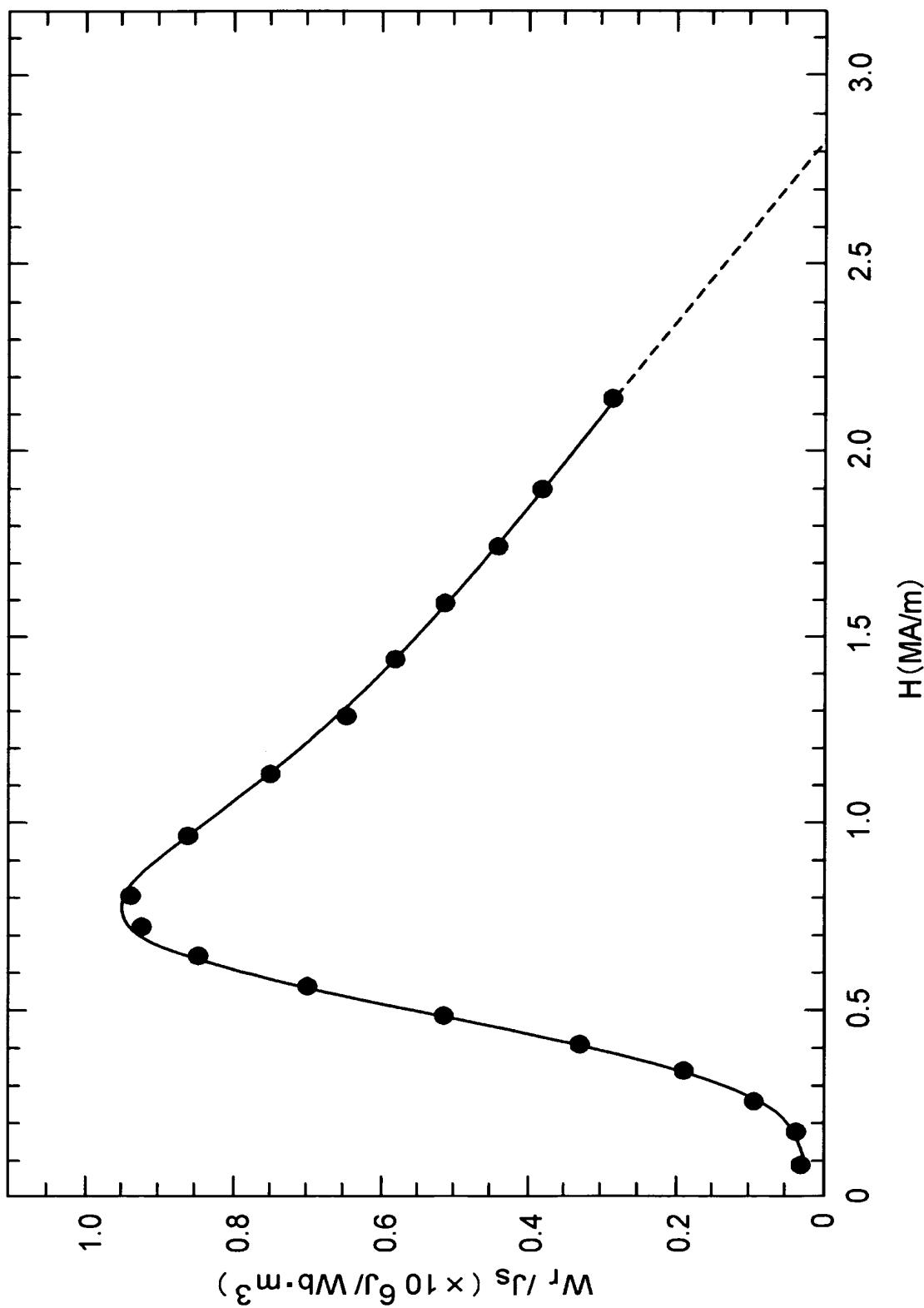


FIG. 9

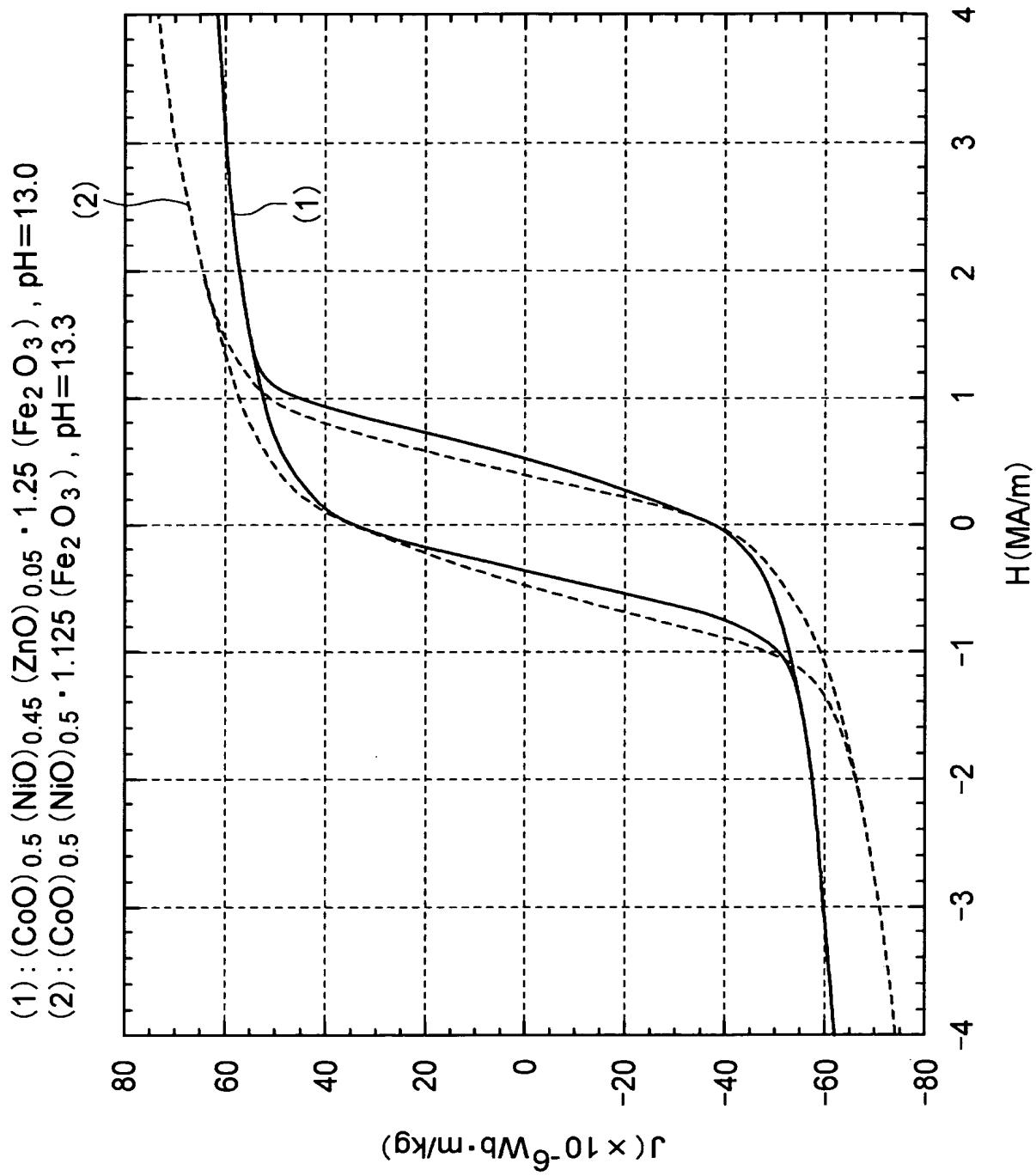


FIG. 10

Fe / (Co + Ni + Mn) (n-MOLAR RATIO)	PH VALUE OF PRECIPITATION SLURRY (pH)	MnO SUBSTITUTION AMOUNT (X+Y)	COERCIVITY Hcj (kA/m)	SATURATION MAGNETIZATION $\sigma_s$ (Wb · m/kg)	REMANENT MAGNETIZATION $\sigma_r$ (Wb · m/kg)
2.25	13.3	0.05	529.2	55.9 × 10 <sup>-6</sup>	30.7 × 10 <sup>-6</sup>
2.25	13.3	0.075	561.9	52.7 × 10 <sup>-6</sup>	28.1 × 10 <sup>-6</sup>
2.25	13.3	0.1	567.5	55.5 × 10 <sup>-6</sup>	30.2 × 10 <sup>-6</sup>
2.25	13.3	0.125	589.7	55.5 × 10 <sup>-6</sup>	30.2 × 10 <sup>-6</sup>
2.25	13.3	0.15	566.6	55.3 × 10 <sup>-6</sup>	29.9 × 10 <sup>-6</sup>
2.25	13.3	0.175	582.0	58.0 × 10 <sup>-6</sup>	32.2 × 10 <sup>-6</sup>
2.25	13.3	0.2	496.7	61.8 × 10 <sup>-6</sup>	34.9 × 10 <sup>-6</sup>
2.25	13.3	0.3	356.6	66.0 × 10 <sup>-6</sup>	36.4 × 10 <sup>-6</sup>
2.25	13.0	0.05	461.4	52.3 × 10 <sup>-6</sup>	29.5 × 10 <sup>-6</sup>
2.25	13.0	0.1	432.9	56.1 × 10 <sup>-6</sup>	31.7 × 10 <sup>-6</sup>
2.25	13.0	0.2	371.7	59.5 × 10 <sup>-6</sup>	33.3 × 10 <sup>-6</sup>
2.25	13.0	0.3	247.5	64.1 × 10 <sup>-6</sup>	34.6 × 10 <sup>-6</sup>

FIG. 11

Fe / (Co +Ni+Mn) (n-MOLAR RATIO)	pH VALUE OF PRECIPITATION SLURRY (pH)	MnO SUBSTITUTION AMOUNT (X+Y)	COERCIVITY HcJ (kA/m)	SATURATION MAGNETIZATION $\sigma_s$ (Wb · m/kg)	REMANENT MAGNETIZATION $\sigma_r$ (Wb · m/kg)
2.5	13.3	0.05	556.0	45.4 × 10 <sup>-6</sup>	21.8 × 10 <sup>-6</sup>
2.5	13.3	0.1	561.5	45.0 × 10 <sup>-6</sup>	20.6 × 10 <sup>-6</sup>
2.5	13.3	0.2	530.1	45.4 × 10 <sup>-6</sup>	20.4 × 10 <sup>-6</sup>
2.5	13.3	0.3	415.1	57.6 × 10 <sup>-6</sup>	28.5 × 10 <sup>-6</sup>
2.5	13.3	0.4	247.8	66.1 × 10 <sup>-6</sup>	33.9 × 10 <sup>-6</sup>
2.5	13.0	0.05	555.2	40.7 × 10 <sup>-6</sup>	19.4 × 10 <sup>-6</sup>
2.5	13.0	0.1	527.1	46.8 × 10 <sup>-6</sup>	23.9 × 10 <sup>-6</sup>
2.5	13.0	0.2	437.0	54.0 × 10 <sup>-6</sup>	28.4 × 10 <sup>-6</sup>
2.5	13.0	0.3	282.2	60.5 × 10 <sup>-6</sup>	31.5 × 10 <sup>-6</sup>
2.25	13.0	0.4	208.7	62.7 × 10 <sup>-6</sup>	30.9 × 10 <sup>-6</sup>

FIG.12

Fe / (Co +Ni+Mn) (n-MOLAR RATIO)	pH VALUE OF PRECIPITATION SLURRY (pH)	MnO SUBSTITUTION AMOUNT (X+Y)	COERCIVITY HcJ (kA/m)	SATURATION MAGNETIZATION $\sigma_s$ (Wb·m/kg)	REMANENT MAGNETIZATION $\sigma_r$ (Wb·m/kg)
2.75	13.3	0.05	501.8	$39.4 \times 10^{-6}$	$35.3 \times 10^{-6}$
2.75	13.3	0.1	513.8	$38.9 \times 10^{-6}$	$41.6 \times 10^{-6}$
2.75	13.3	0.2	498.0	$39.7 \times 10^{-6}$	$47.0 \times 10^{-6}$
2.75	13.3	0.3	476.2	$49.6 \times 10^{-6}$	$50.3 \times 10^{-6}$
2.75	13.3	0.4	339.1	$54.8 \times 10^{-6}$	$57.9 \times 10^{-6}$
2.75	13.0	0.05	503.6	$35.3 \times 10^{-6}$	$13.8 \times 10^{-6}$
2.75	13.0	0.1	516.5	$41.6 \times 10^{-6}$	$19.1 \times 10^{-6}$
2.75	13.0	0.2	454.9	$47.0 \times 10^{-6}$	$22.2 \times 10^{-6}$
2.75	13.0	0.3	398.3	$50.3 \times 10^{-6}$	$23.9 \times 10^{-6}$
2.75	13.0	0.4	235.4	$57.9 \times 10^{-6}$	$27.5 \times 10^{-6}$